

invention is patentably distinct; 2) Applicant has argued that the purpose of the leading edge is to cut through grass whereas neither Mertens nor Koehler devices have this structure; and 3) Applicant's argument is not germane since the Applicant has not claimed these characteristics. Although not clear from these statements, it is assumed by these comments that the Examiner believes that Applicant has not specifically set forth Applicant's "knife-like leading edge" as a separate limitation. However, it is clear from the language of claim 1 that "a knife-like leading edge" is an express element of that claim. Claim 1 recites, in part, "[a] golf club head comprising . . . a metal blade comprising a striking face, a sole, and a rear face, the striking face and the sole meeting at a knife-like leading edge". MPEP § 2173.01 states that "[a]pplicant may use . . . any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought." It is clear from the language of claim 1 that a knife-like leading edge is included as an express limitation within the boundaries of the claim and anyone of ordinary skill in the art would interpret the claim to include such a limitation.

Mertens discloses a golf club having an improved sole configuration; the sole configuration comprises four cambered surfaces, a third cambered surface is located proximate a leading edge which is located at the forwardmost progression of a ball striking surface of the golf club head, and all four cambered surfaces are generally trapezoidal in shape. Nowhere in Mertens is there a teaching or suggestion of a knife-like leading edge. To the contrary, FIGS. 4, 6, and 7 show that the striking face and the sole meet at about a 90 degree angle at a rounded leading edge (28). Mertens' invention pertains to the configuration of the sole of the club head and also to a metallic layer disposed on the striking surface. The physical properties of the leading edge (28) are not discussed at all. Therefore, as Mertens clearly does not teach or suggest a knife-like leading edge, claim 1 should be allowable over Mertens. As claims 19 and 20 depend from claim 1, they should be allowable for the same reason.

Claims 1 and 19 were rejected by Examiner under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,301,944 to Koehler. This ground of rejection is respectfully traversed.

Koehler discloses a golf club head having a two-portioned sole, one portion of the sole meeting the face at a leading edge (22), and an increased radius of curvature of the leading edge. Nowhere in Koehler is there a teaching or suggestion of a knife-like leading edge. Again, to the contrary, FIGS. 1, 2, 3(a), 3(b), and 3(c) show that the face and sole meet at rounded leading

edge. Further, Koehler teaches away from a knife-like leading edge at Column 5, lines 1-9, where Koehler discloses that the leading edge of his club head has an increased radius of curvature “to allow the wedge to spread the blades of grass rather than cut across them”. The knife-like leading edge of claim 1 promotes a “weed-whacker” action, enabling a golfer to get out of the rough with control because the golf club does not twist. For these reasons, claim 1 should be allowable over Koehler. As claim 19 depends from claim 1, it should be allowable for the same reasons.

Claims 2-13 and 16-18 were rejected by Examiner under 35 U.S.C. 103(a) as being unpatentable over Mertens in view of U.S. Patent No. 5, 013,041 to Sun et al. and U.S. Patent No. 5,489,097 to Simmons. This ground of rejection is also traversed.

Although Sun et al. disclose the use of weight members, it fails to cure the deficiency of Mertens with respect to a teaching or suggestion of a knife-like leading edge. The leading edge of Sun et al. is not given a reference numeral as it is not material to the invention. However, FIG. 3 of Sun et al. shows that the leading edge (the edge where the sole plate (17) meets the face plate (11)) is rounded. As neither Sun et al. nor Mertens teach or suggest the knife-like leading edge of claim 1, claims 2-13 and 16-18, which depend from claim 1, should be allowable over these cited references.

Simmons suffers the same defect as Mertens and Sun et al. It also fails to teach or suggest a knife-like leading edge. Although not given a reference numeral because of its immateriality to the invention of Simmons, the face (16) of the club head is shown in FIGS. 2, 5, 7 and 8 to meet the sole (18) at a blunt, approximately 90 degree angle. Therefore, as Mertens, Sun et al. and Simmons, whether singly or in combination, fail to teach or suggest all the limitations of claim 1, claims 2-13 and 16-18 which depend from claim 1, should be patentable over these references.

Claims 2-13 and 16-18 were rejected by Examiner under 35 U.S.C. 103(b) as being unpatentable over Koehler in view of Sun et al. and Simmons. This ground of rejection is traversed for the same reasons as given above with respect to Mertens, Sun et al. and Simmons. These references, singly or in combination, fail to suggest the knife-like leading edge which is recited in Claim 1. As such, claims 2-13 and 16-18, which depend from claim 1, should be patentable over these cited references.

Claims 14-15 were rejected by Examiner under 35 U.S.C. 103(a) as being unpatentable over any one of Mertens or Koehler and further in view of U.S. Patent No. 4,065,133 to Gordos and U.S. Patent No. 5,603,668 to Antonious. This ground of rejection is again traversed. In the Final Office Action, the Examiner recited, verbatim, her rejection of the First Office Action, without responding to Applicant's arguments relating to this ground of rejection. Applicant respectfully requests that the Examiner respond to the substance of Applicant's argument.

Gordos discloses a golf club having side wall surfaces 18 with parallel grooves formed therein, said grooves being longitudinally aligned and in communication with groove extensions 32a and 34a. Gordos fails to cure the deficiency of Mertens and Koehler with respect to a knife-like leading edge. The face plate of Gordos is shown in FIGS. 3 and 5 to meet the sole of the club head at a rounded and relatively high degree angle. Thus, claim 1 and claims 14-15, which depend from claim 1, should be patentable over these cited references.

In addition, claim 14 is separately patentable over Mertens or Koehler in view of Gordos. Claim 14 recites the golf club of claim 1 "wherein the knife-like leading edge is serrated". The serration of the knife-like leading edge can help improve the effectiveness of the knife-like leading edge as it cuts through the rough. None of the cited references teaches or suggests a leading edge which is serrated. Rather, Gordos discloses grooves which run the entire length of the upper and bottom surfaces of the club head and which act as a directional vane to maintain the club head in a desired arcuate path, reducing the likelihood of twisting of the club. The rounded, blunt edge of Gordos, where the face plate meets the bottom surface of the club head, precludes the possibility that the "grooves" of Gordos can be serrated. "Serrated" is defined as "notched like the edge of a saw" or "having or forming a row of small, sharp, projections resembling the teeth of a saw". (See attached definitions.) FIGS. 1, 3, 5, and 6 reveal that the grooves of Gordos do not meet the definition of "serrated". Therefore claim 14 is separately patentable over Mertens or Koehler in view of Gordos. As claim 15 depends from claim 14, it is patentable for the same reasons.

Antonious discloses a club head with an improved sole construction including cavities and/or projections on the sole in various shapes. The cavities and projections on the sole are spaced behind the leading edge of the club head and include a substantially vertical wall facing the leading edge of the golf club head.

Antonious, like Gordos, fails to cure the deficiency of Mertens and Koehler with respect to the knife-like leading edge limitation of claim 1. As shown in FIGS. 3, 4A, 7A, 11A, 13A, 17A, 23A, 25A and 27A, the striking face (20) of Antonious meets the sole (28) at a blunt, relatively high degree angle, rather than at a knife-like leading edge. For this reason, claims 14-15, which depend from claim 1, are patentable over the cited references.

In addition, claim 14 is separately patentable over Mertens or Koehler in view of Antonious. Claim 14 recites a club head wherein "the knife-like leading edge is serrated". Nowhere in Antonious is there taught or suggested that the leading edge is serrated. Rather it is the sole of Antonious that has cavities or projections. Antonious' purpose for placing cavities or projections on the sole is to move a greater amount of sand directly at the ball creating an improved shot from a bunker. Serrating the leading edge would not serve this purpose and therefore Antonious can not suggest a knife-like leading edge. Therefore, claim 14 is separately patentable over Mertens or Koehler in view of Antonious. As claim 15 depends from claim 14, it should be patentable for the same reasons.

Under Examiner's "Response to Arguments", Examiner states that "[i]n response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art." Examiner went on to discuss the motivation in Mertens and Koehler. Although Applicant made no argument regarding combining references in his response, Applicant will respond to the substance of Examiner's argument.

First, Examiner states that 1) Mertens is motivated to move the ball from the rough, 2) that Applicant's argument that Koehler's device does not cut the grass but spreads it does not make the claimed invention patentably distinct, 3) that an artisan skilled in the art would choose to design the leading edge sharp enough to cut the grass based on the design requirements and the cost of manufacturing, and 4) that the modified Mertens and Koehler devices are a means to achieve the same function as that claimed for the invention. None of these statements by Examiner remotely meet the requirements of § 2142 of the MPEP which requires that in order for a *prima facie* case of obviousness to be made out, the prior art reference, or references when

combined, must teach or suggest all the claim limitations. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." MPEP § 2142, citing *Ex parte Clapp*, 227 USPQ 972,973 (Bd. Pt. App. & Inter. 1985) (emphasis added). Examiner has not shown that any of the cited references teach or suggest a knife-like leading edge. Nor has Examiner in any way shown how any of the references suggest a modification of the inventions of such references to reach Applicant's invention. Examiner's statement that "[a]n artisan skilled in the art would choose to design the leading edge sharp enough to cut the grass based on the design requirements and the cost of manufacturing" is a broad, conclusory statement which is not supported or suggested by any of the references. Examiner has clearly failed to present a *prima facie* case of obviousness.

Secondly, Examiner states that Applicant has failed to provide any evidence of new and unexpected results and that therefore Applicant's limitations clearly are obvious and lack criticality. Applicant has explained how the claimed knife-life leading edge cuts through grass allowing a golfer to obtain better control when hitting from the rough, a benefit not taught or suggested by any cited reference. Further, it is not incumbent upon Applicant to come forward with evidence of unexpected results, unless or until Examiner has presented a *prima facie* case of obviousness. MPEP § 2142 states that "[i]f the Examiner does not produce a *prima facie* case, the Applicant is under no obligation to submit evidence of nonobviousness . . . The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention." As Examiner has clearly failed to present a *prima facie* case of obviousness, such a requirement by the Examiner is untimely.

In view of the above remarks, Applicant respectfully submits that claims 1-20 are patentable over the cited references. Withdrawal of the rejections and allowance of these claims is respectfully requested.

The Commissioner is hereby authorized to charge any fees that may be due in connection with these remarks to Deposit Account No. 04-1679.

Respectfully submitted,

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Found **5** entries for **serrated**.

ser•rate (sĕr'āt')

adj.

1. Having or forming a row of small sharp projections resembling the teeth of a saw: *serrate teeth; a serrate talon.*
2. Having a saw-toothed edge or margin notched with toothlike projections: *serrate leaves.*

tr. v. **ser•rated, ser•rat•ing, ser•rates**

To make serrate or saw-toothed; jag the edge of.

[Latin *serrātus*, *saw-shaped*, from *serra*, *saw*.]

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ser•rated (sĕr'ā'tīd, sə-rā'tīd)

adj.

Notched like the edge of a saw; saw-toothed; serrate.

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Serrate \Ser"rate\, Serrated \Ser"ra*təd\, a. [L. serratus, fr. serra a saw; perhaps akin to secare to cut, E. saw a cutting instrument. Cf. Sierra.] 1. Notched on the edge, like a saw.

2. (Bot.) Beset with teeth pointing forwards or upwards; as, serrate leaves.

Doubly serrate, having small serratures upon the large ones, as the leaves of the elm.

Serrate-ciliate, having fine hairs, like the eyelashes, on the serratures; -- said of a leaf.

Serrate-dentate, having the serratures toothed.

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serrated adj : notched like a saw with teeth pointing toward the apex [syn: serrate, saw-toothed, toothed, notched]

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serrated

serrated: in CancerWEB's On-line Medical Dictionary

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